and a return of the pleural exudate are prevented by this method. The amount of nitrogen introduced into the pleural cavity must not be large enough to cause any compression of lung substance, and consequently it is better to control the amount injected by a fluoroscopic examination at the time of injection. The procedure had to be repeated two and three times in 3 of Arnsperger's cases, but no untoward effects were observed from these injections. Arnsperger also combined this method with autoserotherapy, injecting subcutaneously from 1 to 3 c.c. of the patient's own exudate as the needle was withdrawn from the pleural cavity.

PEDIATRICS

UNDER THE CHARGE OF

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Secretion of the Mammary Glands in Infants an Index to the Mother's Nursing Power.—K. Basch (*Münch. med. Woch.*, 1911, lviii, 2266) calls attention to the fact that there occurs in infants a secretion of milk from the mammary gland similar to that occurring in the nursing mother. This activity of the mammary gland occurs in both male and female infants, and the secretion morphologically shows the same elements as mothers' milk—free fat droplets and white blood cells. The most plausible explanation for this secretion in the newborn child is advanced by Knöpflemacher, who holds it is due to a physiological process, and that the same stimulus which starts the mother's milk secretion also starts that of the child. He was unable, however, to verify this by animal experimentation. By injecting extracts of embryos, endometrium, and ovaries from pregnant animals into virgin animals, a proliferation of the mammary gland substance was demonstrated, but never a secretion of milk. The author, however, has been able to accomplish this by injecting placental extract into non-pregnant animals, which had, however, been pregnant at some previous time. The same result, in lesser degree, was obtained in animals which had never been pregnant before. In all these cases of milk secretion, however, there was no accompanying mammary hyperplasia, such as occurs physiologically during lactation. This hyperplasia was finally accomplished by implanting an ovary from a pregnant animal into a non-pregnant animal. The hyperplasia, plainly apparent and proved by microscopic tests, followed the course usual to a pregnant animal of that species; but when the maximum was reached secretion of milk was not forthcoming. If then placental extract was injected, the milk secretion appeared. Therefore Basch concludes that the mammary hyperplasia in pregnancy is set up by stimulating substances arising in the ovary, while the incidence of the milk secretion is caused by similar substances arising from the matured placenta. Basch applied this explanation to the problem of milk secretion in infants. By using placental secretion on infants in which a preceding mammary secretion had normally disappeared, he was able to stimulate the milk secretion again. While Henoch and other authorities state that the mammary secretion begins usually on the fourth day and ends about the twentieth day after birth, Basch has frequently seen the secretion in infants three, four and one-half, and five months old. By comparing the degree of mammary reaction in a large number of infants to the quality and the supply of the mother's milk, Basch has found that there exists a parallel between the two. So that, in general, an early and free mammary secretion in the infant prophesies an accompanying rich and sufficient maternal milk secretion. This fact was apparent in a series of 100 cases especially studied. A weak or absent reaction in the infant, however, does not imply, with as much certitude, a weak or failing maternal supply.

The Standard Role of the Salts in Mother's Milk in Infancy and Childhood.—Hans Friedenthal (*Münch. med. Woch.*, 1911, lviii, 2385) remarks on the growing disinclination of women to nurse their infants, with the result that in Germany, at least, only a small and constantly diminishing percentage of infants get the benefit of mother's milk during the first nine months of life. In the necessary substitution of nourishment for mother's milk the most important factor—that of the proper combination of the salts—has been very little emphasized. Cow's milk, fortunately, comes nearest to human milk in its salt content. The standard of absolute ash-content in milk is the rapidity of skeletal growth. Human milk contains the least percentage of ash, since the growth of the human skeleton is the slowest of all skeletal animals. Therefore, within physiological limits, a milk rich in ash will stimulate skeletal growth and vice versa. The salts of calcium especially, and of iron are important factors in this connection. Different specimens of human milk differ in 50 per cent of cases in their ash content, but show considerably less difference in the proportion of their salts. Cow's milk, to have the same proportion of calcium as human milk, must be diluted more than five times. But with this dilution the proportions of sodium and potassium are reduced 4 per cent. and 31 per cent. respectively, below those of human milk. So that in practice it is impossible in any way to get the same proportion of salts in cow's milk by dilution. Only by the addition of the deficient elements can the difference be equalized. If there is a deficiency of one important inorganic element such as potassium, for instance, no other salt in any proportion can make up for or take the place of the deficient element. The loss of 3 mg. of iron from a liter of infant's nourishment continually would mean a slow but inevitably fatal result. The proper proportion of inorganic elements in an infant's nourishment is, therefore, of the first importance. Friendenthal believes it is of the greatest importance, practicaly to exhibit the salt content of human milk in the child's nourishment, not only during the first months of life, but during the entire physiological suckling stage of three years. A system for its practicable application is highly desirable.